

Appl No. 09/515,428  
Amdt. dated November 16, 2004  
Reply to Office Action of August 26, 2004

### REMARKS

Claims 1-14 remain in the case.

The present invention is directed to a process for hydrolyzing di-isopropyl ether (hereinafter DIPE) comprising feeding a stream comprising DIPE into a distillation column having a solid acid catalyst therein, and hydrolyzing DIPE to isopropanol (hereinafter IPA).

In the Official Action, it is stated that although Bezman (U.S. '822) fails to teach catalytic distillation, since "applicant admits that catalytic distillation is recognized in the art as being an advantageous technique because it allows for a higher degree of conversion in addition to being a more economically viable technique ..." it would have been obvious to incorporate such a technique in Bezman.

This is not what the present specification teaches.

The present specification merely acknowledges that the *catalytic distillation concept* has certain recognized advantages.

Where in the prior art is there any expectation of success in applying the *concept* of catalytic distillation to a process for hydrolyzing DIPE to IPA? There is not the slightest suggestion that it would work.

As set forth in the specification, it has been suggested in the past to apply catalytic distillation to various processes, as in, for example, U.S. Patent 2,403,672, issued and available as public knowledge since July 9, 1946. Since that time scores if not hundreds or thousands of patents have issued describing reactions including generating IPA from DIPE, such as, for example, U.S. 5,585,572, granted more than 50 years after U.S. '672. And yet not a single patent in 50+ years suggests using catalytic distillation to generate IPA from DIPE. It is the present inventors that teach it is possible.

A proposed modification must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. Amgen v. Chugai Pharmaceutical, 18 USPQ2d 1016. Hindsight is not a justifiable basis on which to find that the ultimate achievement of making IPA from DIPE using catalytic distillation - 50 years

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after the first suggestion of catalytic distillation - has a reasonable chance of success. "Obvious to try" is not a sufficient motivation.

Furthermore, at what point in the Bezman process is it proposed that the catalytic distillation column be placed? Bezman teach contacting a stream comprising reactants and water with an ion exchange resin (col. 1, lines 50+). The bottom product contains water, IPA, DIPE, and other material (col. 3, line 3+). After a second distillation column, yet another separation technique is required to obtain IPA (col. 3, line 59+). Bezman needs three separation steps!

In the present invention, a DIPE stream enters the catalytic distillation column at the bottom and water enters at the top (Claim 8) - not at all what is suggested by Bezman. The product IPA is taken off as a bottoms fraction and DIPE is taken overhead (Claim 2) - again, not at all what is suggested by Bezman. A single distillation column containing a catalyst for the conversion of DIPE to IPA is all that is needed to obtain substantially 100% conversion. This is a surprising and unobvious result that is not fairly suggested by the prior art.

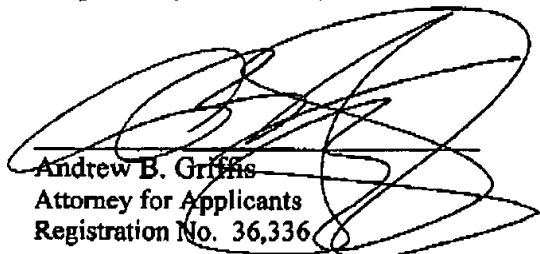
Thus, even if the combination of Bezman and the concept of catalytic distillation is made, the limitations of the present claims are not met.

Accordingly, it is respectfully requested that the rejection be withdrawn.

It is believed that the present application is now in condition for allowance and early notice of the same is earnestly solicited.

Respectfully submitted,

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Andrew B. Griffiths  
Attorney for Applicants  
Registration No. 36,336

ExxonMobil Chemical Company  
Law Technology  
P.O. Box 2149  
Baytown, Texas 77522-2149  
(281) 834-1886 (Voice)  
(281) 834-2495 (Fax)